

## Energy Exchange

*Federal Sustainability for the Next Decade*

U.S. Department of Energy



# Attendee Guide

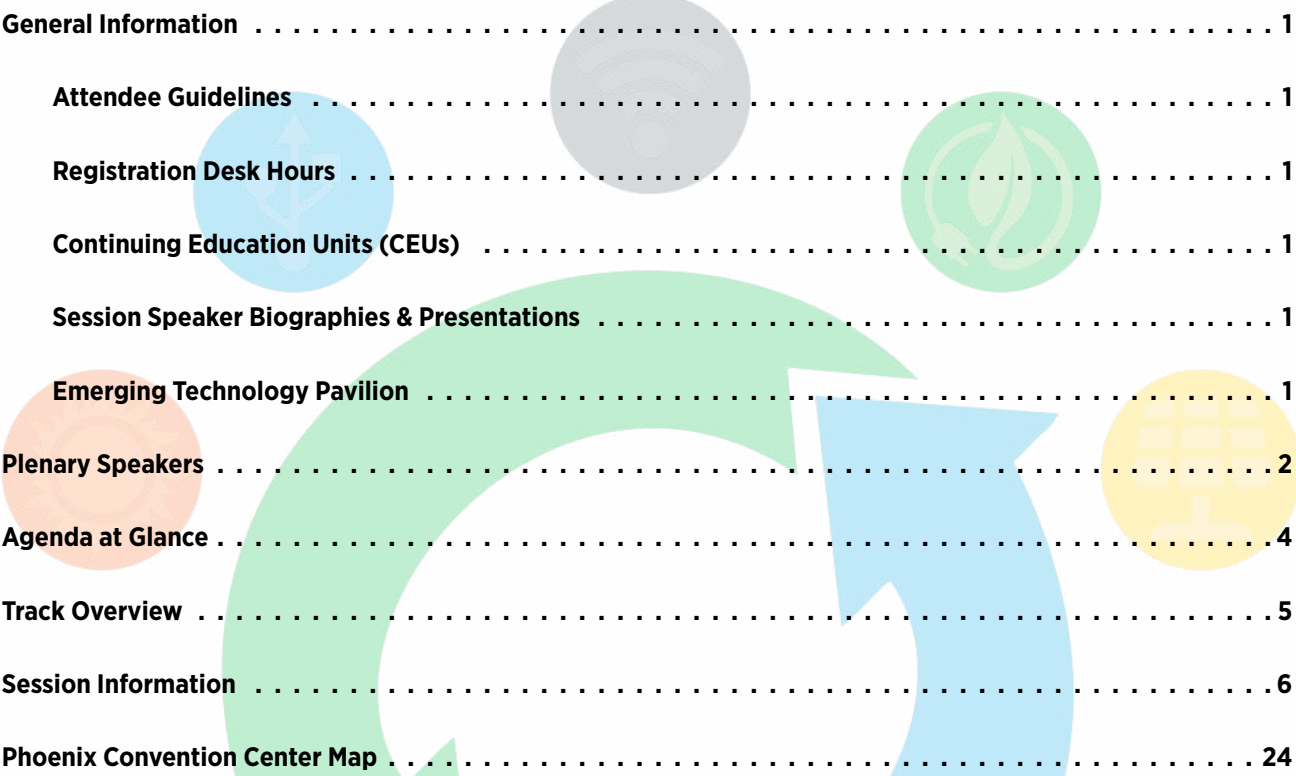
August 11-13, 2015 › Phoenix Convention Center › Phoenix, Arizona



Organized by



# Table of Contents



A decorative graphic is centered on the page, featuring a large circular arrow that loops clockwise. The arrow is composed of two segments: a light green one on the left and a light blue one on the right. Surrounding the arrow are five circular icons: a grey one at the top with a gear-like pattern, a green one on the right with a leaf-like pattern, a yellow one on the bottom right with a grid pattern, an orange one on the bottom left with a globe-like pattern, and a blue one on the left with an anchor-like pattern.

<b>General Information</b>	1
<b>Attendee Guidelines</b>	1
<b>Registration Desk Hours</b>	1
<b>Continuing Education Units (CEUs)</b>	1
<b>Session Speaker Biographies &amp; Presentations</b>	1
<b>Emerging Technology Pavilion</b>	1
<b>Plenary Speakers</b>	2
<b>Agenda at Glance</b>	4
<b>Track Overview</b>	5
<b>Session Information</b>	6
<b>Phoenix Convention Center Map</b>	24

# General Information

## Attendee Guidelines

- All attendees must wear their Energy Exchange registration badges, which serve as “entry tickets,” when attending training sessions at the Phoenix Convention Center. Energy Exchange registration badges will be scanned at the entryway to each training room. The badges provide a side benefit of facilitating introductions, as friendly discussions often occur when one person notices another’s organization.
- Training session seating is first come, first served.
- Please be respectful of Energy Exchange speakers, including silencing all electronic devices. Photography is not allowed during session presentations.

## Registration Desk Hours

Sunday through Thursday, staff will be available at the Energy Exchange registration desk to answer any questions:

- Sunday, August 9      10:00 AM – 5:00 PM
- Monday, August 10    8:00 AM – 5:00 PM
- Tuesday, August 11    7:30 AM – 5:00 PM
- Wednesday, August 12 8:00 AM – 5:00 PM
- Thursday, August 13   8:00 AM – 5:00 PM

Before and after the event, attendees may contact the Energy Exchange mailbox: [EnergyExchangeInfo@ee.doe.gov](mailto:EnergyExchangeInfo@ee.doe.gov).

## Continuing Education Units

The majority of the Energy Exchange training sessions are eligible for International Association for Continuing Education and Training (IACET) continuing education units (CEUs). All sessions are eligible for CEUs except those with notations in their session descriptions in the Session Information section (pp. 6–23). Session eligibility is also noted in the Agenda at a Glance (p. 4). To receive CEUs, Energy Exchange attendees are required to attend a qualifying session, pass a session quiz with a minimum score of 80%, and complete a session evaluation administered through the Whole Building Design Guide® (WBDG) course portal. Session quizzes will be available August 21, 2015, through September 21, 2015. Session presenters will discuss learning objectives and CEU requirements and provide a link to the WBDG course portal at the beginning of each training session that offers CEUs. For more information, please contact: [EnergyExchangeInfo@ee.doe.gov](mailto:EnergyExchangeInfo@ee.doe.gov).

Available CEUs:

- 0.1 CEUs for a 1.0-hour training session
- 0.2 CEUs for a 1.5-hour training session

## Session Speaker Biographies & Presentations

Session speaker biographies are available from the Energy Exchange website. Presentations will also be available on the Energy Exchange website after the Energy Exchange. Learn more at: <http://energy.gov/eere/femp/energy-exchange>.

## Emerging Technology Pavilion

The Emerging Technology Pavilion is located in the Energy ConneXions trade show space. The pavilion features over 25 leading edge technologies, many funded by the U.S. Department of Energy’s Building Technologies Office, covering water heating and appliances; windows and building envelope; lighting; and more! Dr. Timothy Unruh, FEMP’s Program Director, will be performing the ribbon cutting for the Emerging Technology Pavilion on Monday, August 10 at 5 PM.

# Plenary Session Speakers

The Energy Exchange proudly welcomes the following plenary session speakers. Their biographies are available on the Energy Exchange website: <http://energy.gov/eere/femp/energy-exchange-plenary-speakers>.

## Opening Plenary Session

Tuesday, August 11  
8:30 AM - 10 AM



THE HONORABLE  
DAVID DANIELSON  
*Assistant Secretary for  
Energy Efficiency and  
Renewable Energy*  
U.S. Department of Energy



THE HONORABLE  
DENNIS MCGINN  
*Assistant Secretary of  
the Navy for Energy,  
Installations, and  
Environment*  
U.S. Navy



THE HONORABLE  
GREG STANTON  
*Mayor*  
City of Phoenix



DR. TIMOTHY UNRUH  
*Program Director, Federal  
Energy Management  
Program*  
U.S. Department of Energy



MR. D. EVAN VAN HOOK  
*Corporate Vice President,  
Health, Safety, Environment,  
Product Stewardship and  
Sustainability*  
Honeywell International



## Closing Plenary Session

Thursday, August 13

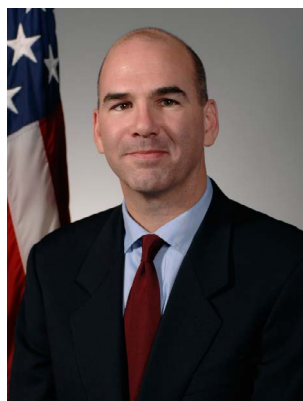
11:30 AM - 1:00 PM



THE HONORABLE  
KATHERINE  
HAMMACK  
*Assistant Secretary of the  
Army for Installations,  
Energy, and Environment*  
U.S. Army



DR. TIMOTHY UNRUH  
*Program Director, FEMP*  
U.S. Department of Energy



MR. MICHAEL  
MCGHEE  
*Principal Director for  
Environment, Safety and  
Infrastructure Policy*  
U.S. Air Force



DR. SANDRA WELLS  
*Director, Eastern  
Management  
Development Center  
Center for Leadership  
Development*  
U.S. Office of Personnel  
Management



MR. TIMOTHY MANN  
*Manager, Global  
Environmental Policy and  
Programs*  
IBM Corporate  
Environmental Affairs



MR. MARK WAGNER  
*Vice President,  
Government Relations*  
Johnson Controls, Inc.

Agenda at a Glance

Energy Exchange	TRACK	Track 1 Solution Showcase	Track 2 Agency Energy Manager	Track 3 Energy Technologies	Track 4 Sustainability	Track 5 Project Financing	Track 6 Integrated Energy	Track 7 Building Performance	Track 8 Energy Leadership	Track 9 Institutional Change	Track 10 Innovation	
DAY	TIME	SESSION	Room 126	Room 127	Room 132	Room 121	Room 131	Room 129	Room 124	Room 122	Room 128	Room 125
Opening Plenary Session												
Morning Break												
TUESDAY	8:30am - 10:00am		Leading by Example: Federal Energy Solution Highlights	The Art and Science of Energy Management	Overview of Federal Technology Demonstration Programs	Federal Leadership in Sustainability	Meeting the President's Performance Contracting Challenge	Perspectives on Federal Energy and Water Use	Buildings for a Sustainable Future	Federal Energy Legislation	Institutional Change for Sustainability	Federal Leadership in Innovation
	10:00am - 10:30am		Lunch (Lunch will not be provided. Onsite concessions will be available for attendees.)									
	10:30am - 12:00pm	1										
	12:00pm - 2:00pm		Lunch (Lunch will not be provided. Onsite concessions will be available for attendees.)									
	2:00pm - 3:30pm	2	GSA's NDER Program: Doubling the Energy Savings from Financed Projects	Legislative Drivers, Compliance, and FEMP Services	The Next Generation of Facility Energy Auditing Tools	An Introduction to Executive Order 13693: Planning for Federal Sustainability in the Next Decade	UESC Basics: Project Financing Through Your Utility	Fleet Efficiency	Elements of Building and Data Management Tools	DOD Roundtable	Integrating Behavioral Change into Energy and Water Management	VOLTRON and Grid Integration
WEDNESDAY	3:30pm - 4:00pm		Afternoon Break									
	4:00pm - 5:30pm	3	Greening the Federal Government	Benchmarking and Data Analysis	Building Management and Operations for Performance and Efficiency	Sustainability Planning	ESPC Large and Small: The Basics of ESPC	Combined Heat and Power (Making a Comeback)	Building Operator Training to Save Energy	New Executive Order 13693: Planning for Sustainability	Aligning with Organizational Mission to Drive Energy Saving	Sensors of the Future
	8:30am - 10:00am	4	Retained Energy Savings: Putting It into Practice	Energy Audits: Implementing Audits and Turning Audits into Projects	Renewable Energy Technologies	Guiding Principles	Achieving Deeper Energy Savings in Financed Projects	Planning Large and Small Scale Microgrids and Smart Grids	Strategic Energy Management (SEM) Training	Energy Lawyers Forum	Recruiting, Developing, and Retaining the Next Generation of Employees to Support Energy Efficiency, Renewable Energy, and Sustainability in the Public Sector	Regional Innovation in Arizona
	10:00am - 10:30am		Morning Break									
	10:30am - 12:00pm	5	Deep Energy Retrofit Technology Solutions	Life-Cycle Cost Methodology	Windows & Building Envelope Technologies	Getting to Net Zero: Energy, Water and Waste	M&V: High and Low Level Perspectives	Integration of the Energy Industry	Constructing High Performance New Buildings	OMB's Energy and Sustainability Scorecards	Engaging and Empowering Building Occupants to Meet Energy Goals	Rolling Out the Next Wave of Zero Emission Vehicles with Fuel Cell Power
THURSDAY	12:00pm - 2:00pm		Lunch (Lunch will not be provided. Onsite concessions will be available for attendees.)									
	2:00pm - 3:30pm	6	BetterBuildings Program Projects	Campus Approach to Energy Management	HVAC Technologies	Climate Adaptation Planning	Implementing Renewable Energy Projects through Private Financing	Operational Resilience and Recovery	Procurement, Process and People: The Path to Zero Energy Outcomes	DOE Leadership Roundtable	Doing More with Less through the GSA Areawide Contract and FEMP's UESC Program	Energy Storage and Distribution Technologies
	3:30pm - 4:00pm		Afternoon Break									
	4:00pm - 5:30pm	7	Using Alternative Financing to Enhance Energy Performance in Renovation Projects	Building Teams and Procuring Services	The Next Network: Lighting, Controls and the Internet of Things	Water Efficient Operations	Economics of Financed Projects	District Heating and Cooling: Optimized Comfort	Data Center Energy Management Strategies	Civilian Agency Roundtable	Engaging Senior Management to Effect Change	Partnering with Your Utility To Do Large-Scale Energy Projects
	8:30am - 9:30am	8	Successful Small Projects using ESPC ENABLE	Compliance Reporting Systems	Technology Transition	Green Buildings: Architecture, Landscape and Operations	Tools for a Successful Project	Metering Strategies	Using DOE's Energy Modeling Tools for Retrofit Planning	Implementing Clean Power Plan 111(d)	Federal Buildings Personnel Training Act: What It Means for You, What Our Agencies are Doing About it, and Resources and Tools You can Use	Utility-Based Technology Demonstration Programs
THURSDAY	9:30am - 9:45am		Morning Break									
	9:45am - 11:15am	9	Lessons Learned from ARRA Projects	Energy Manager Skill Development Resources and Certifications	Incorporating the Voice of the Customer: Shaping the R&D Programs	Reducing Scope 1, 2 and 3 Greenhouse Gas Emissions	Forum on Lessons Learned from Financed Projects	Low/No Cost Solutions through Building Automation System Control Technologies	Operations and Maintenance Strategies for Improved Building Performance	Industry Roundtable	Case Studies of Institutional Change at the Campus Level	Cybersecurity Roundtable
	11:15am - 11:30am		Morning Break									
Closing Plenary Session												

KEY: Black Text: IACET continuing education units are available for these sessions    Teal Text: IACET continuing education units are not available for these sessions

## Track Overview

The Energy Exchange offers 90 sessions that have been organized into the 10 tracks described below. Learn more about the Energy Exchange sessions, including participating speakers and full session descriptions on pages 6-23.

Room Number	Track
126	Track 1 – Solution Showcase: Innovative and proven technology and service solutions to address barriers and impacts, including replicable solutions and implementation models.
127	Track 2 – Agency Energy Manager: Energy management from the agency energy manager’s perspective, including benchmarking and data analysis, life-cycle cost methodology, and energy procurement.
132	Track 3 – Energy Technologies: Projects and programs shaping the future of energy management.
121	Track 4 – Sustainability: Federal sustainability requirements and how they are being addressed.
131	Track 5 – Project Financing: Financial mechanisms for funding energy efficiency and renewable energy projects at federal facilities.
129	Track 6 – Integrated Energy: Crosscutting and advanced topics to help achieve energy efficiency and sustainability at the facility and agency levels.
124	Track 7 – Building Performance: Techniques to address common problems inhibiting optimized building performance.
122	Track 8 – Energy Leadership: A forum for senior agency managers to discuss leadership and strategy.
128	Track 9 – Institutional Change: Methods for organizational engagement, including guidance for working across all levels of an organization, to help achieve sustainability and energy management goals.
125	Track 10 – Innovation: Selected topics on state-of-the-art technologies and practices in the areas of energy storage, cybersecurity, renewables integration, and more.

**Track 1: Solution Showcase**  
**Room 126**

**Leading by Example: Federal Energy Solution Highlights**

Learn about the U.S. Navy's Renewable Energy Program Office's (REPO) projects, the U.S. General Services Administration's energy data initiatives, and the Green Button pilot project.

**Session Speakers:**

- Robert Griffin, U.S. Navy
- Barry Haaser, Green Button Alliance

*CEUs are not available for this session.*

**Track 2: Agency Energy Manager**  
**Room 127**

**The Art and Science of Energy Management**

This session will provide attendees with an overview of energy management that sets the groundwork to meeting mission assurance and energy security requirements in a dynamic environment.

**Session Speakers:**

- Jeff Means, U.S. Department of Veterans Affairs
- Robert Ruch, U.S. Army Corps of Engineers
- Butch Wallace, Sain Engineering Associates, Inc.

*CEUs are not available for this session.*

**Track 3: Energy Technologies**  
**Room 132**

**Overview of Federal Technology Demonstration Programs**

Session speakers will explain how major federal technology demonstration programs are structured; including sources of funding, limitations on types of projects/level of technology, annual cycles, expectations of successful participants, examples of successful demonstrations, points of contact, and resources for obtaining more information.

**Session Speakers:**

- Scott Clark, HydroGeoLogic, Inc.
- Sven Mumme, U.S. Department of Energy
- Eleni Reed, U.S. General Services Administration
- Collin Weber, Navigant Consulting

*CEUs are not available for this session.*

**Track 4: Sustainability**  
**Room 121**

**Leadership in Sustainability**

This session will provide attendees with an overview of sustainability and a forward-looking vision on how federal agencies and other organizations can take a leadership role in implementing comprehensive sustainability strategies.

**Session Speakers:**

- Daniel Kreeger, Association of Climate Change Officers
- Dee Siegel, White House – Council on Environmental Quality

*CEUs are not available for this session.*

**Track 5: Project Financing**  
**Room 131**

**Meeting the President's Performance Contracting Challenge**

Session speakers will provide a comprehensive update of federal agency progress toward the President's Performance Contracting Challenge. Session speakers will also deliver an overview of the resources available to assist federal agencies in reaching their goals. Attendees will also be provided with a federal agency's perspective on its efforts to establish a pipeline of projects that far exceed the agency's original commitment to the challenge.

**Session Speakers:**

- Sharon Conger, U.S. General Services Administration
- Paul Robinson, U.S. Army Corps of Engineers
- Tim Unruh, U.S. Department of Energy

*CEUs are not available for this session.*



**Track 6: Integrated Energy**  
**Room 129**

**Perspectives on Federal Energy and Water Use**

This session provides an overview of major energy and water initiatives.

**Session Speakers:**

- Richard Kidd, U.S. Army
- Kristine Kingery, U.S. Army
- Amanda Simpson, U.S. Army

*CEUs are not available for this session.*

**Track 7: Building Performance**  
**Room 124**

**Building for a Sustainable Future**

Learn about the forward-thinking strategies and visions for developing a sustainable built environment. The panel will discuss the important aspects to ascertaining building quality: energy and water consumption, greenhouse gas emissions and other waste, material use, resilient design, occupant health and productivity. The panelists will share their knowledge and project experience in innovative design, strategies, and technologies. They will also discuss the relevant challenges and opportunities associated with climate change, population growth, and technology advances.

**Session Speakers:**

- Brendan Owens, U.S. Green Building Council
- Teresa Rainey, EYP Architecture & Engineering
- Roland Risser, U.S. Department of Energy

*CEUs are not available for this session.*

**Track 8: Energy Leadership**  
**Room 122**

**Federal Energy Legislation**

Attendees will be provided with an update on federal energy legislation currently pending in Congress, including energy efficiency legislation introduced by the chairmen of the House and Senate energy committees, efficiency legislation introduced again by Senators Portman and Shaheen, and legislation introduced to fix the scoring problem with energy savings performance contracts (ESPCs) and utility energy service contracts (UESCs).

**Session Speakers:**

- Ashley Patterson, Ameresco
- Mark Wagner, Johnson Controls

*CEUs are not available for this session.*

**Track 9: Institutional Change**  
**Room 128**

**Institutional Change for Sustainability**

How do agencies make sustainability practices “business as usual” throughout their organizations? People are the key factor in ensuring that policies, programs, and technologies achieve energy-saving objectives and sustain those savings over time. This session provides an overview of why institutional context matters, how it is essential for sustainability, and how institutional change may be achieved.

**Session Speakers:**

- Irina Feygina, White House
- Hayes Jones, U.S. Department of Energy

*CEUs are not available for this session.*

**Track 10: Innovation**  
**Room 125**

**Federal Leadership in Innovation**

This session will showcase the power of innovation and the federal government’s role to support and advance state of the art technologies for public good. Leading innovation experts from industry and government will share insights, inspire attendees, and illustrate future disruptive technologies.

**Session Speakers:**

- Michael Contreras, U.S. Department of Energy
- Cheryl Martin, Harwich Partners
- Eric Rohlifing, U.S. Department of Energy
- Amy Schwartz, IDEO
- Colin Tetreault, Arizona State University

*CEUs are not available for this session.*

**Track 1: Solution Showcase**  
**Room 126**

**GSA's NDER Program: Doubling the Energy Savings from Financed Projects**

Under the Presidential Performance Contracting Challenge (PPCC), agencies have committed to energy projects with an estimated \$4.81 billion investment value to be awarded by 2016. Agency representatives, energy service companies (ESCOs), and subcontractors are interested in learning more about the U.S. General Services Administration (GSA) National Deep Energy Retrofit (NDER) program successes. This session will include a recap on NDER program improvements due to ESCO feedback, past engagements, details about the suggestions that have had real impacts on energy usage, and case studies.

**Session Speakers:**

- Nicole Bulgarino, Ameresco
- Sharon Conger, U.S. General Services Administration
- Kevin Vaughn, Schneider Electric

**Track 2: Agency Energy Manager**  
**Room 127**

**Legislative Drivers, Compliance, and FEMP Services**

Federal energy experts will explain the various requirements outlined in the Energy Independence and Security Act of 2007 (EISA), the Energy Policy Act of 2005 (EPACT), energy-related executive orders, and other federal energy requirements energy managers need to implement as part of their comprehensive energy programs.

**Session Speakers:**

- Hayes Jones, U.S. Department of Energy
- Chris Tremper, U.S. Department of Energy

**Track 3: Energy Technologies**  
**Room 132**

**The Next Generation of Facility Energy Auditing Tools**

The energy auditing process is a common starting point for a number of efficiency improvement or cost savings projects. However, this process itself has largely remained the same, and the results have been dependent upon the skill of the auditor. This session will highlight the latest in building auditing approaches that can significantly reduce the cost and time required for audits, while also providing a greater amount of insight and information into each building. The technologies highlighted in this session were previously demonstration projects from the U.S. Department of Defense's Environmental Security Technology Certification Program (ESTCP).

**Session Speakers:**

- Domenic Armano, FirstFuel
- Dave Ferro, concept3D
- Tom Scaramellino, Essess, Inc.

**Track 4: Sustainability**  
**Room 121**

**An Introduction to Executive Order 13693: Planning for Federal Sustainability in the Next Decade**

Executive Order (EO) 13693: Planning for Federal Sustainability in the Next Decade, passed on March 19, 2015, has many elements and identifies mandatory goals for federal agencies. This session will provide an overview of the new executive order, with related agency goals and implementing instructions.

**Session Speakers:**

- Jesse Gary, U.S. Department of Energy
- Brad Gustafson, U.S. Department of Energy
- Dee Siegel, White House – Council on Environmental Quality

**Track 5: Project Financing**  
**Room 131**

**UESC Basics: Project Financing Through Your Utility**

Under the Presidential Performance Contracting Challenge, agencies have committed to energy projects with a total estimated \$4.81 billion investment value, to be awarded by 2016. Utility energy service contracts (UESCs) are a key pathway toward meeting this challenge. Both agency representatives and utility company representatives are keenly interested in learning more about the partnership opportunities available to them through UESCs. This session will explain how UESCs can be used to finance projects and implement energy efficiency improvements at federal sites.

**Session Speakers:**

- Christopher Gillis, Pacific Gas & Electric Company
- Julia Kelley, Oak Ridge National Laboratory
- Michaela Martin, ICF International

**Track 6: Integrated Energy**  
**Room 129**

**Fleet Efficiency**

Attendees will learn about new Executive Order 13693: Planning for Federal Sustainability in the Next Decade and its impact on the federal fleet. This session will discuss the FleetDASH and FAST programs and how federal fleet managers can use them to help monitor their fleets and their adherence to the new executive order. Federal fleet and energy managers will be provided with success stories and tips to put these concepts into practice to meet agency sustainability goals.

**Session Speakers:**

- Navid Ahdieh, National Renewable Energy Laboratory
- Daniel Robinson, U.S. Marine Corps
- Ron Stewart, Idaho National Laboratory

**Track 7: Building Performance**  
**Room 124**

**Elements of Building and Data Management Tools**

Learn about the tools that can be used to address market barriers and improve a building's performance. Building and data management tools can be used to collect, manage, and analyze information about building performance. These tools provide building operations staff with the ability to implement energy efficiency programs and policies and a better understanding of the potential impacts of investing in energy efficiency. Each tool addresses one or more phases of a building's life cycle: design, operation, renovation, and rental or sale.

**Session Speakers:**

- Andrew Burr, U.S. Department of Energy
- Michael Deru, National Renewable Energy Laboratory
- David Jump, Quantum Energy Services & Technologies

**Track 8: Energy Leadership**  
**Room 122**

**DOD Roundtable**

This session will offer attendees the opportunity to hear the latest on U.S. Department of Defense energy programs from the three deputy assistant energy secretaries. This will be an interactive question-and-answer session with the audience. Attendees will be able to ask about new initiatives, progress toward the President's Performance Contracting Goal, implementation of the new executive order on planning for sustainability, and more.

**Session Speakers:**

- Mark Correll, U.S. Air Force
- Richard Kidd, U.S. Army
- Joseph Bryan, U.S. Navy

*CEUs are not available for this session.*

**Track 9: Institutional Change**  
**Room 128**

**Integrating Behavioral Change into Energy and Water Management**

The new sustainability executive order EO 13693, is among the most recent formalized efforts to establish and meet challenging energy and water management goals. Those goals likely cannot be met through technological "fixes" alone. This session provides hands-on ideas and guidance for identifying and working with the parties who are essential to achieving lasting energy, water, and resource savings.

**Session Speakers:**

- Rick Diamond, Lawrence Berkeley National Laboratory
- Christopher Payne, Lawrence Berkeley National Laboratory
- Amy Wolfe, Oak Ridge National Laboratory

**Track 10: Innovation**  
**Room 125**

**VOLTTRON and Grid Integration**

This panel discussion will provide an in-depth look at "what's happening" in the efforts toward integrating renewables into the national grid as they play an increasingly important role for utilities and distributed grid users. Attendees will learn about VOLTTRON's abilities to independently manage a wide range of applications, such as HVAC systems, electric vehicles, distributed energy or entire building loads, leading to improved operational efficiency and energy and cost savings.

**Session Speakers:**

- Srinivas Katipamula, Pacific Northwest National Laboratory
- Teja Kuruganti, Oak Ridge National Laboratory

*CEUs are not available for this session.*

**Track 1: Solution Showcase**  
**Room 126**

**Greening the Federal Government**

The Federal Regional Council (FRC) convenes various agencies to help improve the effectiveness and efficiency of federal programs. In partnership with the Council on Environmental Quality, the FRC has gathered best practices and lessons learned on activities to green the federal government. This session will highlight projects that help meet various Executive Orders around water conservation, green fleets, aggregated solar, waste reduction and energy efficiency by achieving actual results.

**Session Speakers:**

- Jim Bochat, Commissioning Concepts
- Trina Martynowicz, U.S. Environmental Protection Agency
- Jeanne Nordstrom, U.S. Department of Veterans Affairs

**Track 2: Agency Energy Manager**  
**Room 127**

**Benchmarking and Data Analysis**

Session speakers will share the value, uses, and potential return on investment of a robust benchmarking and analysis regimen. Learn how benchmarking and data analysis helps federal energy managers in meeting all federal energy requirements as they implement comprehensive energy programs.

**Session Speakers:**

- Michael Parker, Johnson Controls
- Sandrine Schultz, U.S. Navy

**Track 3: Energy Technologies**  
**Room 132**

**Building Management and Operations for Performance and Efficiency**

Building performance improvements based on energy monitoring and evaluation can support low-cost or no-cost energy savings. New user-friendly and cost-effective tools and technologies that support this type of analysis (energy management and information systems or EMIS) are new to the market but end users are overwhelmed by the choices, confused by complexity, afraid of technology obsolescence, and need guidance in this space. There are many competing platforms, protocols, and many different ways to implement building performance improvements (individual fixture/load level, building level, etc.). This session will highlight specific applications, definitions and breakdown the requirements to help overcome some of the complexity. Presenters will also highlight examples of best practices to show that success is achievable.

**Session Speakers:**

- Guanjing Lin, Lawrence Berkeley National Laboratory
- Shanti Pless, National Renewable Energy Laboratory
- Joseph Phillips, IBM

**Track 4: Sustainability**  
**Room 121**

**Sustainability Planning**

Federal agencies have different missions and cultures that influence how they implement sustainability within their organizations. Agency leaders in sustainability will offer their organizations' approaches to sustainability planning, describe agency successes, and discuss how those approaches could be adapted to other organizations.

**Session Speakers:**

- Eleni Reed, U.S. General Services Administration
- John Shonder, U.S. Department of Energy
- Paul Wirt, U.S. Army Reserve

**Track 5: Project Financing**  
**Room 131**

**ESPC Large and Small: The Basics of ESPC**

This session provides a high-level introduction to the energy savings performance contract (ESPC); including its evolution as a popular procurement vehicle, the steps involved in getting one started, an explanation of the ESPC phases, and some of the common challenges associated with these contracts. Both the U.S. Department of Energy's and U.S. Army Corps of Engineer's ESPC contracts will be discussed in this session. Federal energy managers who attend the session will be aware of—and thus able to avoid—the pitfalls others have encountered when starting an ESPC, ultimately saving time and money.

**Session Speakers:**

- Tom Hattery, Oak Ridge National Laboratory
- Wayne Latham, U.S. Department of Energy
- Michael Norton, U.S. Army Corps of Engineers



**Track 6: Integrated Energy**  
**Room 129**

**Combined Heat and Power (Making a Comeback)**

Combined heat and power (CHP) is making a comeback. Industry leaders will talk about CHP status, provide examples of federal projects, and describe the new initiatives and resources available to help CHP projects get wider acceptance. Implementing CHP projects and lessons learned will help federal energy managers meet agency sustainability goals.

**Session Speakers:**

- Bob Albertini, Pepco
- Tom Broderick, Southwest Energy Efficiency Project
- Chris Lyons, Solar Turbines

**Track 7: Building Performance**  
**Room 124**

**Building Operator Training to Save Energy**

Attendees will learn about implementing building operator training to increase the operating efficiency of federally managed buildings. Building operations staffs often have more opportunities to save energy than they realize. Identifying and correcting inefficient practices can reduce energy use in commercial buildings by up to 20%. Building Re-Tuning Training (BRT) and Building Operator Certification (BOC) training provide hands-on learning opportunities for improving building energy efficiency and occupant comfort and well-being, as well as extending equipment life. During this session, attendees will explore what is already known about the benefits of building operator training, discuss highlights of BRT and BOC, describe who is a good candidate for BRT and BOC, and explain the logistics of getting BRT and BOC training.

**Session Speakers:**

- Brian Gilligan, U.S. General Services Administration
- Amanda Hatherly, Santa Fe Community College
- Srinivas Katipamula, Pacific Northwest National Laboratory

**Track 8: Energy Leadership**  
**Room 122**

**New Executive Order 13693: Planning for Sustainability**

This session will provide an overview of Executive Order (EO) 13693: Planning for Federal Sustainability in the Next Decade, passed on March 19, 2015, as well as an overview of the new EO's implementing instructions.

**Session Speakers:**

- Manisha Patel, White House – Council on Environmental Quality
- Dee Siegel, White House – Council on Environmental Quality
- Cynthia Vallina, Office of Management and Budget

*CEUs are not available for this session.*

**Track 9: Institutional Change**  
**Room 128**

**Aligning with an Organizational Mission to Drive Energy Savings**

This session will explore the importance of linking an organizational mission with energy savings to achieve and sustain lasting change. Linking sustainability to agency/staff missions and responsibilities may effectively spur the kinds of behavioral changes needed to initiate and sustain change over time. This session explores examples and provides opportunities for discussion.

**Session Speakers:**

- Chris Tindal, U.S. Navy
- Monica Witt, Los Alamos National Laboratory

**Track 10: Innovation**  
**Room 125**

**Sensors of the Future**

This session will provide a review and demonstration of cutting edge “turnkey” portable, easy-to-install building sensor technology currently in development. Learn how these sensors of the future can be easily deployed by a variety of building services personnel, and make it easier for building owners and operators to reap the benefits and cost savings for building commissioning. Following this demonstration, share in an overview of the U.S. Department of Energy's Building Technologies Office (BTO)'s upcoming Sensors and Controls Research & Development (R&D) Program Roadmap, which will identify industry needs and prioritize R&D initiatives. This overview will highlight opportunities for public comment and involvement in the Roadmap's development. Session participants will have the opportunity to talk with BTO one-on-one regarding sensor- and control-related building energy management.

**Session Speakers:**

- Teja Kuruganti, Oak Ridge National Laboratory
- Hayden Reeve, United Technologies Research Center
- Marina Sofos, U.S. Department of Energy

*CEUs are not available for this session.*

**Track 1: Solution Showcase**  
**Room 126**

**Retained Energy Savings: Putting It into Practice**

Energy and Independence Security Act (EISA) Section 431 required all federal agencies to reduce energy consumption in federal buildings by 3% per year and by 30% by 2015, based on a 2003 baseline. Executive Order 13693 extends this goal, requiring agencies to further reduce their energy consumption by 2.5% per year for the next 10 years. This session will provide attendees with success stories of implementing a retained energy savings policy within the federal sector and useful tools to advocate for energy savings.

**Session Speakers:**

- Don Juhasz, Defense Logistics Agency
- Mike Van Dam, Defense Logistics Agency

**Track 2: Agency Energy Manager**  
**Room 127**

**Energy Audits: Implementing Audits and Turning Audits into Projects**

Audits can range from a paper review, to a review of some period of metering, to a crawl through the dustiest nooks and crannies of the physical plant. Each approach has its pros and cons; varying factors include cost, time, details of findings, and the kinds of improvements that can result. This session will help federal energy managers determine the best approaches to auditing to maximize time and cost efficiencies.

**Session Speakers:**

- Mike Gutowski, Johnson Controls
- Kathryn Guy, U.S. Army Corps of Engineers
- Jim Woodward, Pacific Northwest National Laboratory

**Track 3: Energy Technologies**  
**Room 132**

**Renewable Energy Technologies**

In this session, participants will learn about innovations and opportunities in three technology spaces: catalyzing solar solutions, as presented by the U.S. Department of Energy's (DOE) Solar Energy Technologies Office; the Collegiate Wind Competition and other means of making wave energy more competitive with traditional energy solutions, as presented by the DOE's Wind and Water Technologies Office; and very efficient methods to provide air conditioning to facilities, as presented by the Naval Facilities Engineering and Expeditionary Warfare Center.

**Session Speakers:**

- Michael Contreras, U.S. Department of Energy
- Sara Hunt, BCS, Inc.
- Dave Wilkinson, U.S. Navy

**Track 4: Sustainability**  
**Room 121**

**Guiding Principles**

Few federal agencies have been able to meet the Guiding Principles requirements. One major challenge identified by agencies is understanding how best to comply given limited resources. Session speakers will share strategies that have resulted in major steps forward for the agencies involved.

**Session Speakers:**

- Loida Begley, U.S. Department of Energy
- Hetal Jain, U.S. Department of Transportation
- Sarah Jensen, U.S. Department of Energy

**Track 5: Project Financing**  
**Room 131**

**Achieving Deeper Energy Savings in Financed Projects**

The new Executive Order 13963 requires federal agencies to further their energy intensity reductions within buildings over the next decade. In order to reach the targets established in EO 13963, agencies will have to look "deeper" in terms of energy conservation measures within their building portfolios, moving past traditional approaches from the past decade. This session will introduce deep energy retrofit concepts, illustrated by case studies from the United States and abroad, discuss economic aspects of achieving significantly greater energy use reduction than typical major renovation projects, and discuss legal aspects of combining government and private sector funding to finance such projects.

**Session Speakers:**

- Margaret Simmons, U.S. Army Corps of Engineers
- Phillip Smith, Honeywell
- Jay Tulley, U.S. Army Garrison, Presidio of Monterey
- Dusty Wheeler, Honeywell
- Alexander Zhivov, U.S. Army Corps of Engineers

**Track 6: Integrated Energy**  
**Room 129**

**Planning Large and Small Scale Microgrids and Smart Grids**

A microgrid can be a key component to ensuring a facility's energy resilience. Renewables and onsite generation may not be able to provide power in emergency situations without a microgrid to "island" and prioritize loads. This session will discuss key elements of microgrid planning, development, and execution to address energy resilience and integrate onsite generation. The three speakers will provide an overview of microgrid systems, focus on execution and financing, and discuss operational issues of microgrids. This session will help federal energy managers

## Session 4 • Wednesday, August 12 • 8:30 am – 10:00 am

plan microgrid system installation to help meet federal agency energy efficiency and resilience goals.

### Session Speakers:

- Peter Flynn, Bostonia
- Kevin Schneider, Pacific Northwest National Laboratory
- Greg Vallery, U.S. Army

## Track 7: Building Performance Room 124

### Strategic Energy Management (SEM) Training

Learn about the fundamentals and tools needed to understand the core elements, principles, and benefits of strategic energy management (SEM). SEM is a long-term approach to energy efficiency that includes setting goals, tracking progress, and reporting results. For public buildings, SEM reduces costs across many end uses, institutionalizes practices to sustain long-term savings, and can serve as a model for the private sector. A successful SEM plan builds long-term relationships with energy users and targets persistent energy savings to ensure continuous improvement of energy performance and increase the property value of buildings. This session will help federal employees understand how facilities can build an energy management system based on the ISO 50001 energy management system standard. Participants will become familiar with resources and tools available to help any facility move forward with energy management.

### Session Speakers:

- Paul Birkeland, Global Strategic Energy
- Charlie Rienhardt, U.S. General Services Administration
- Ridah Sabouni, Energetics Incorporated

## Track 8: Energy Leadership Room 122

### Energy Lawyers Forum

Federal site energy projects face a variety of legal issues, thanks to the various types of partnership agreements used to implement these projects: energy savings performance contracts, utility energy service contracts, energy sales agreements, and so forth. The audience for this session will participate in a lively question-and-answer panel discussion with federal agency attorneys involved in these types of projects.

### Session Speakers:

- Richard Butterworth, U.S. General Services Administration
- Mike Jensen, U.S. Department of Energy
- Drew Jernigan, U.S. Air Force
- Manisha Patel, White House – Council on Environmental Quality
- Kay Sommerkamp, U.S. Army Corps of Engineers

*CEUs are not available for this session.*

## Track 9: Institutional Change Room 128

### Recruiting, Developing, and Retaining the Next Generation of Employees to Support Energy Efficiency, Renewable Energy, and Sustainability in the Public Sector

This session will explore candidate pools and approaches for attracting, developing, and retaining individuals with the skills needed to lead and ensure an energy-efficient country in the future. As agency staff retires or moves to the private sector, agencies are facing the likelihood of substantial losses in institutional knowledge and leadership. Participants will discuss what agencies can and should do in the realm of workforce planning and development.

### Session Speakers:

- Jeffery Anoka, U.S. Department of Energy
- Natasha Campbell, U.S. Department of Energy
- Kristen Parrish, Arizona State University

## Track 10: Innovation Room 125

### Regional Innovation in Arizona

This session will showcase the role of the public and private sector at a regional level in developing and deploying innovative technologies in Arizona. Leading experts from across Arizona will discuss the unique role of regional clusters in fostering breakthrough technologies in energy and other high-tech sectors.

### Session Speakers:

- Michelle De Blasi, Gammage & Burnham
- John Trujillo, City of Phoenix
- Teresa Wu, Arizona State University

*CEUs are not available for this session.*

**Track 1: Solution Showcase**  
**Room 126**

**Deep Energy Retrofit Technology Solutions**

President Obama signed Executive Order (EO) 13693 on March 19, 2015. The goal of EO 13693 is to maintain federal leadership in sustainability and greenhouse gas emission reductions. Deep energy retrofits are essential to achieving these goals. The session will demonstrate deep energy retrofit technologies and strategies, including often-overlooked building envelope measures.

**Session Speakers:**

- Michael Case, U.S. Army Corps of Engineers
- Axy Pagan-Vazquez, U.S. Army Corps of Engineers
- Alexander Zhivov, U.S. Army Corps of Engineers

**Track 2: Agency Energy Manager**  
**Room 127**

**Life-Cycle Cost Methodology**

Session attendees will learn to employ effective life-cycle cost methodologies to calculate key economic factors: return on investment (ROI), savings-to-investment ratio (SIR), and simple payback (SPB). Federal energy managers can employ these methodologies to successfully select, prioritize, and advocate for energy project funding.

**Session Speakers:**

- Patricia Donohue, U.S. Army Corps of Engineers
- Jeanette Fiess, U.S. Army Corps of Engineers
- Mike Mills, Sain Engineering Associates, Inc.

**Track 3: Energy Technologies**  
**Room 132**

**Windows and Building Envelope Technologies**

This session introduces state-of-the-art window and building envelope technologies; as well as R&D targets for pre-commercialized technologies. Session speakers will discuss technical challenges, site restrictions, and cost-effectiveness issues that decision makers often face when they consider using new technologies to improve building envelope efficiency.

**Session Speakers:**

- Tom Culp, Birchpoint Consulting
- Diana Hun, Oak Ridge National Laboratory
- Sneha Kumar, Alcoa

**Track 4: Sustainability**  
**Room 121**

**Getting to Net Zero: Energy, Water, and Waste**

The U.S. Army is pursuing an aggressive triple net zero concept – net zero energy, water, and waste. This session will provide an overview of the Army's program and share successful case studies on how the program has been implemented for the Army Reserve and a pilot installation at Fort Carson.

**Session Speakers:**

- Scott Clark, U.S. Army
- Alicen Kandt, National Renewable Energy Laboratory
- Amy Solana, Pacific Northwest National Laboratory

**Track 5: Project Financing**  
**Room 131**

**M&V: High and Low Level Perspectives**

Obtain a high-level perspective that addresses the basic elements of a measurement and verification (M&V) plan, followed by a more involved discussion of several topical issues faced by the M&V community. Attendees will learn about the basic fundamentals of M&V plans including what implementers are currently struggling with as the requirements evolve. Attending this session will enable federal energy managers to properly carry out their M&V plans and prepare themselves for future hurdles, saving them time and money in carrying out their goals of greening the government.

**Session Speakers:**

- Kristyn Clayton, Redhorse Corporation
- Phil Coleman, Lawrence Berkeley National Laboratory
- Vernon Hunt, U.S. Navy
- Scott Trotter, Northrop Grumman



**Track 6: Integrated Energy**  
**Room 129**

**Integration of the Energy Industry**

The new dynamic underway in the energy industry involves integrated energy offerings that facilitate energy security. Onsite generation, renewables, demand response, battery storage, and microgrids are dramatically changing the way utilities, energy service companies, and specialty firms offer and procure energy services. Federal energy managers need to know about these services to achieve their goals of greening the government.

**Session Speakers:**

- Nicole Bulgarino, Ameresco
- Jeff Dominick, National Renewable Energy Laboratory
- Andrea Kincaid, Defense Logistics Agency
- Chris Mathey, Constellation Energy

**Track 7: Building Performance**  
**Room 124**

**Constructing High Performance New Buildings**

Attendees will learn how constructing new high-performance buildings can be as cost-effective as retrofitting existing buildings. Proper design and implementation practices can reduce operation costs and environmental impacts for new construction. Simple methods such as empowering contractors and design teams can help maximize performance—without additional cost. This session will provide an understanding of the available tools and resources, the process, and the role of simulation tools, as well as show how the process can guarantee building performance in meeting cost and energy savings goals.

**Session Speakers:**

- Phil Macey, JE Dunn Construction
- Shanti Pless, National Renewable Energy Laboratory
- Paul Torcellini, National Renewable Energy Laboratory

**Track 8: Energy Leadership**  
**Room 122**

**OMB's Energy and Sustainability Scorecards**

The Office of Management and Budget continues to track agency accountability for energy and sustainability programs and progress. Session attendees will learn where their agencies rank on the latest scorecard results.

**Session Speaker:**

- Cynthia Vallina, Office of Management and Budget

*CEUs are not available for this session.*

**Track 9: Institutional Change**  
**Room 128**

**Engaging and Empowering Building Occupants to Meet Energy Goals**

In this session, attendees will participate in a lively discussion about engaging and empowering building occupants to save energy—particularly in workplace contexts in which saving energy is not a priority. In addition to leading the discussion, speakers will provide examples and actionable ideas.

**Session Speakers:**

- Lara Buluc, U.S. Forest Service
- Kevin Kampschroer, U.S. General Services Administration
- Jay Tulley, U.S. Army Garrison, Presidio of Monterey

**Track 10: Innovation**  
**Room 125**

**Rolling Out the Next Wave of Zero Emission Vehicles with Fuel Cell Power**

This panel will showcase the latest in fuel cell electric vehicle (FCEV) technology. Session speakers will explain how these vehicles can help meet agency needs, as well as the next steps for establishing hydrogen infrastructure. Several other benefits and uses of fuel cell transportation technologies will be highlighted, such as fuel cell-based auxiliary power units (APUs) for refrigerated trucks and fuel cells as an option for providing backup building power in emergency power scenarios.

**Session Speakers:**

- John Christensen, Consultant to the U.S. Department of Energy
- Abas Goodarzi, US Hybrid Corporation
- Steve Szanski, Proton On Site

*CEUs are not available for this session.*

**Track 1: Solution Showcase**  
**Room 126**

**Better Buildings Program Projects**

Commercial buildings and industrial plants in the United States collectively account for half of our nation's primary energy use and cost about \$400 billion annually to operate. Greater energy efficiency is our cheapest, cleanest, and fastest energy resource; its implementation can simultaneously lower costs by a total of more than \$80 billion a year, reduce greenhouse emissions, and create high-quality American jobs. Through the Better Buildings Challenge, President Obama is challenging corporate officers, university presidents, energy managers, and building owners to commit to making our nation's buildings 20% more efficient over the next decade. This session will discuss lessons learned from the Better Buildings program, helping federal energy, facility, and portfolio managers to help meet their goals of greening the government.

**Session Speakers:**

- Wendell Brase, University of California at Irvine
- John Dumler, Digital Realty
- Maria Vargas, U.S. Department of Energy

**Track 2: Agency Energy Manager**  
**Room 127**

**Campus Approach to Energy Management**

This session will explore efficient and effective ways to manage energy use within a campus framework. Currently, 90% of federal buildings are situated in a campus setting of 8 or more buildings, and 60% are in a campus setting of at least 100 buildings. These campuses present great opportunities for energy savings.

**Session Speakers:**

- Michael Case, U.S. Army Corps of Engineers
- Otto Van Geet, National Renewable Energy Laboratory
- Daniel Gore, U.S. Department of Energy

**Track 3: Energy Technologies**  
**Room 132**

**HVAC Technologies**

Nearly 50% of energy consumed by government buildings is used for heating, ventilation and air conditioning (HVAC). Meeting goals for government-wide energy reduction will require improved HVAC equipment efficiency and possibly new HVAC system "architectures." This session will review various HVAC technologies, including high-efficiency dehumidification systems (HEDSs), dedicated outdoor air systems (DOASS), ClimaStat™, and underground thermal energy storage (UTES).

**Session Speakers:**

- Scot Duncan, Enerliance Inc.
- Chuck Hammock, Andrews, Hammock & Powell
- Mike West, Advantek Inc.

**Track 4: Sustainability**  
**Room 121**

**Climate Adaptation Planning**

This session will provide perspectives from federal agencies and local government entities on translating climate change vulnerability assessments into comprehensive climate adaptation plans. Learn how leading practitioners are assessing and prioritizing their climate risks.

**Session Speakers:**

- Tom Perrigo, City of Las Vegas
- Joel Scheraga, U.S. Environmental Protection Agency

*CEUs are not available for this session.*

**Track 5: Project Financing**  
**Room 131**

**Implementing Renewable Energy Projects through Private Financing**

Federal agencies can benefit from innovative procurements that support large-scale renewable projects being built with private sector capital and technical know-how. Session speakers will share their experiences when leading agencies involved with such efforts. Topics covered will include the challenges encountered with both on-site and off-site systems, power purchase agreement (PPA) structures, treatment of renewable energy certificates, and future trends. With this information, federal energy managers can accomplish green government goals while saving money.

**Session Speakers:**

- Kathleen Ahsing, U.S. Army
- Ron Allard, U.S. General Services Administration
- Monica DeAngelo, U.S. Navy
- Andrea Kincaid, Defense Logistics Agency

## Session 6 • Wednesday, August 12 • 2:00 pm – 3:30 pm

### Track 6: Integrated Energy Room 129

#### Operational Resilience and Recovery

Session participants will learn how the U.S. Department of Defense and major utilities assess and protect their infrastructure's energy resilience. This session will address the physical and cyber threats that affect both the grid and individual building systems. Federal energy managers will learn how to protect against possible threats that may hinder their progress towards greening the government.

##### Session Speakers:

- David Batz, Edison Electric Institute
- Ariel Castillo, U.S. Department of Defense
- Jeff Dagle, Pacific Northwest National Laboratory

### Track 7: Building Performance Room 124

#### Procurement, Process and People: The Path to Zero Energy Outcomes

Attendees will learn about key elements of the bid process, including development, hand-off, and operational aspects that are unique to building and/or occupying zero energy buildings. Zero energy is measured at the meter, not just at the model, and involves a range of policies, parties, and practices. There are early adopters and exemplary federal and market building projects that can ease the learning curve for others. This session will provide an overview and update on zero net energy policies (e.g., Executive Order 13514). Speakers will share best practices in procurement documentation and the development process from key specifications through to occupancy hand-off. Then the focus will be on occupancy and operations, with a market-leading firm presenting both design and operational factors that support and hinder success in achieving a zero energy building.

##### Session Speakers:

- Dave Elrod, DPR Construction
- Roger Grant, National Institute of Building Sciences
- Kinga Porst, U.S. General Services Administration
- Jason Sielcken, U.S. General Services Administration
- Martin Weiland, U.S. General Services Administration

### Track 8: Energy Leadership Room 122

#### DOE Leadership Roundtable

Learn about the U.S. Department of Energy (DOE) programs within the Department's Office of Energy Efficiency and Renewable Energy (EERE). This session explores the Department's Building Technologies Office (BTO), the Federal Energy Management Program (FEMP), the Sustainability Performance Office (SPO), and the four offices

focused on renewable power sources: geothermal, solar, wind, and water.

##### Session Speaker:

- Roland Risser, U.S. Department of Energy
- John Shonder, U.S. Department of Energy
- Dr. Timothy Unruh, U.S. Department of Energy

*CEUs are not available for this session.*

### Track 9: Institutional Change Room 128

#### Doing More with Less through the GSA Area-wide Contract and FEMP's UESC Program

This session will share case studies and provide an overview of the Federal Energy Management Program's Utility Energy Services Contract (UESC) program, available through the General Services Administration Area-wide Utilities Contract. The UESC program provides a cost-effective, timely, and streamlined means to obtain new energy conservation measures and infrastructure, while also accomplishing federal government energy reduction, renewable energy, and energy resiliency goals established by executive orders.

##### Session Speakers:

- David Baker, U.S. Department of State
- Mark Ewing, U.S. General Services Administration
- Christopher Gillis, Pacific Gas & Electric Company
- Jeff Niesz, Pepco

### Track 10: Innovation Room 125

#### Energy Storage for Federal Installations

This session will explore the main challenges related to the widespread deployment of energy storage. It will also include a case study presentation featuring a nationwide Energy Savings Performance Contract (ESPC) energy storage project.

##### Session Speakers:

- John Schaaf, Johnson Controls
- Scott Sklar, The Stella Group

*CEUs are not available for this session.*

**Track 1: Solution Showcase**  
**Room 126**

**Using Alternative Financing to Enhance Energy Performance in Renovation Projects**

President Obama signed Executive Order (EO) 13693 on March 19, 2015. The goal of EO 13693 is to maintain federal leadership in sustainability and greenhouse gas emission reductions. This EO extends the goals outlined in the Presidential Memorandum of December 2, 2011 (Implementation of Energy Savings Projects and Performance-Based Contracting for Energy Savings). The new, more aggressive reduction goals can be met—but only if we think outside the box. This interactive workshop and brainstorm session will show attendees how to convert a sample building to net zero, presenting ways to reach the mandated goals through integrated design.

**Session Speakers:**

- Cara Carmichael, Rocky Mountain Institute
- Kinga Porst, U.S. General Services Administration
- Skye Schell, U.S. Department of Energy

**Track 2: Agency Energy Manager**  
**Room 127**

**Building Teams and Procuring Services**

Many factors can have an impact on a project's success. This session will provide attendees with an understanding of the importance of team composition, setting expectations, Federal Acquisition Regulation (FAR) requirements and vendor selection, internal communication, organization of project review, and approval and leadership commitment. This session will explore the various ways to look at your needs and wants and what services are available.

**Session Speakers:**

- Kevin Johnson, Energy Systems Group
- Kay Sommerkamp, U.S. Army Corps of Engineers
- Butch Wallace, Sain Engineering Associates, Inc.

**Track 3: Energy Technologies**  
**Room 132**

**The Next Network: Lighting, Controls, and the Internet of Things**

Lighting is one of the highest fixed power loads in public buildings. Federal agencies are estimated to have about 15.5 million linear fluorescent fixtures containing almost 40 million lamps and using approximately 4.6 TWh annually. This session will explain how next-generation LED lighting with advanced networked controls will cut that energy use in half.

**Session Speakers:**

- Mandeep Khera, Daintree Networks
- Kishore Manghnani, Orama Inc.
- Michael Myer, Pacific Northwest National Laboratory
- Francis Rubinstein, Lawrence Berkeley National Laboratory

**Track 4: Sustainability**  
**Room 121**

**Water Efficient Operations**

Water efficiency is an important aspect of a sustainability program. This session will focus on a comprehensive approach to facility water management, providing an overview of the process, information on Federal Energy Management Program resources and products, and a successful case study.

**Session Speakers:**

- Thomas Blanchard, Centers for Disease Control and Prevention
- Kate McMordie Stoughton, Pacific Northwest National Laboratory
- Francis Wheeler, Water Savers LLC

**Track 5: Project Financing**  
**Room 131**

**Economics of Financed Projects**

In this session, researchers will discuss four recent papers that grapple with the economic worthiness of financed projects. The discussion will cover optimal use of appropriated funds in the context of these projects, savings realization in energy savings performance contracts (ESPCs) vs. conventionally funded projects, “hidden” savings from financed projects, and the appropriate handling of utility rate escalations. The session will leave agencies in a position to make more informed evaluations of a project's financed value and full impact on the federal site.

**Session Speakers:**

- Phil Coleman, Lawrence Berkeley National Laboratory
- John Shonder, U.S. Department of Energy



**Track 6: Integrated Energy**  
**Room 129**

**District Heating and Cooling: Optimized Comfort**

Attend a discussion on district heating and cooling system optimization and the pros and cons of district systems in contrast to smaller, localized systems. Attendees will learn how to operate district heating and cooling systems more efficiently without sacrificing the comfort of building occupants. Federal energy managers will learn about optimizing heating and cooling systems, which will help in meeting sustainability goals.

**Session Speakers:**

- Brian Boyd, Pacific Northwest National Laboratory
- Robert McMillin, Siemens
- Robert Somers, 2rw Consultants, Inc

**Track 7: Building Performance**  
**Room 124**

**Data Center Energy Management Strategies**

Data centers consume 1%–2% of the United States' total electricity. Their electricity consumption makes a significant contribution to IT and facility operational costs. As the nation's appetite for computing continues to grow, the portion of electricity consumed by data centers also grows. In response, the U.S. Department of Energy has begun the Data Center Partnerships program as part of the Better Buildings Challenge. This session will provide information on how to use existing best practices and strategies to improve the energy efficiency of data centers.

**Session Speakers:**

- Linda Baschnagel, U.S. General Services Administration
- John Dumler, Digital Realty
- Will Lintner, U.S. Department of Energy
- Les Martin, U.S. Air Force
- Dale Sartor, Lawrence Berkeley National Laboratory

**Track 8: Energy Leadership**  
**Room 122**

**Civilian Agency Roundtable**

Hear the latest information about civilian agency energy programs directly from agency leadership. Share in an interactive, question-and-answer session format. Learn about new initiatives, progress toward the President's Performance Contracting Goal, and implementation of the new executive order for sustainability planning and more.

**Session Speaker:**

- Hetal Jain, U.S. Department of Transportation
- Kevin Kampschroer, U.S. General Services Administration
- Joel Scheraga, U.S. Environmental Protection Agency

*CEUs are not available for this session.*

**Track 9: Institutional Change**  
**Room 128**

**Engaging Senior Management to Effect Change**

This session will identify paths forward for breaking through the seemingly impenetrable barrier of organizational stovepipes. Great energy saving ideas, technologies, or programs often require the buy-in, action, or approval of individuals residing in different operational areas of an organization. This session provides ideas and guidance for identifying key organizational players and for encouraging their buy-in, approval, and leadership.

**Session Speakers:**

- Rick Diamond, Lawrence Berkeley National Laboratory
- Christopher Payne, Lawrence Berkeley National Laboratory
- Amy Wolfe, Oak Ridge National Laboratory

**Track 10: Innovation**  
**Room 125**

**Partnering with Your Utility to Do Large-Scale Energy Projects**

Federal mandates are asking for more renewable energy projects on federal sites. This session will take a closer look at how to partner with utility companies to do large-scale renewable projects on federal lands. Attendees will learn from experts who have successfully implemented these projects. Best practices and case studies will be shared.

**Session Speakers:**

- Jim Holton, Southern Company
- Chandra Shah, National Renewable Energy Laboratory

*CEUs are not available for this session.*

**Track 1: Solution Showcase**  
**Room 126**

**Successful Small Projects using ESPC ENABLE**

ESPC ENABLE is a vehicle for financing smaller-scale energy efficiency measures at federal sites. In this session, speakers will provide an overview of ESPC ENABLE, share the real experiences of agencies that have the project development process, and review lessons learned. Topics will include examining an agency portfolio to determine opportunities, creating a good project team, and bundling multiple agency sites into one project.

**Session Speakers:**

- Michael Bartlett, ABM Industries, Inc.
- Lara Buluc, U.S. Forest Service
- Bob Slattery, Oak Ridge National Laboratory
- Mike Holda, Lawrence Berkeley National Laboratory

**Track 2: Agency Energy Manager**  
**Room 127**

**Compliance Reporting Systems**

Session speakers will provide an overview of current operations, plans for near-term changes, and the long-term vision of the federal reporting regimen. Comprehensive annual reporting, compliance tracking systems (CTS), ENERGYSTAR Portfolio Manager, the Office of Management and Budget's MAX system, and potentially other reporting mechanisms will become increasingly important for federal energy managers as Executive Order 13693 is implemented.

**Session Speakers:**

- Sarah Jensen, U.S. Department of Energy
- Zach Shelin, The Cadmus Group, Inc.
- Chris Tremper, U.S. Department of Energy

**Track 3: Energy Technologies**  
**Room 132**

**Technology Transition**

This session will review the challenges to incorporating promising new or underutilized energy technologies into the mainstream. Challenges include acquisition (sole source), funding, O&M, marketing, culture, momentum, risk, status quo technologies, M&V.

**Session Speakers:**

- Paul Kistler, U.S. Navy
- Steve McMaster, U.S. Department of Energy

**Track 4: Sustainability**  
**Room 121**

**Green Buildings: Architecture, Landscape and Operations**

This session will focus on key elements of green building strategies and provide insights from a successful federal agency program.

**Session Speakers:**

- David Guthrie, U.S. Fish and Wildlife Service
- Lance Marbut, U.S. Bureau of Reclamation

**Track 5: Project Financing**  
**Room 131**

**Tools for a Successful Project**

During the first portion of this session, the speakers will seek to garner and share the experiences of the developers and early users of the U.S. Department of Energy's new web-based energy savings performance contract (ESPC) project data tracking and reporting system, eProject Builder (ePB). ePB provides standardized ESPC data collection, transparent calculations for project scenarios, and electronic generation of Task Order schedules. The second portion of the session will provide a review of the Department's new energy service company (ESCO) Selector tool. The tool assists agencies in building out a notice of opportunity (NOO) for an ESPC project. Using a web-based interface, the tool automates NOO document assembly; agency users need only input information on key project parameters by responding to a systematic series of prompts.

**Session Speakers:**

- Elizabeth Stuart, Lawrence Berkeley National Laboratory
- Scott Wolf, Oak Ridge National Laboratory

**Track 6: Integrated Energy**  
**Room 129**

**Metering Strategies**

Learn how metering can be a powerful tool in an energy manager's portfolio. The 2014 Federal Building Metering Guidance includes new metering requirements. Session speakers will review these new requirements and discuss how others have used interval meter data to identify energy efficiency opportunities.

**Session Speakers:**

- Saralyn Bunch, U.S. Department of Energy
- Marcus DeLaRosa, Pacific Northwest National Laboratory
- Peter Virag, Weston Solutions, Inc.

**Track 7: Building Performance**  
**Room 124**

**Using DOE's Energy Modeling Tools for Retrofit Planning**

This session will explore how the U.S. Department of Energy's (DOE's) building energy analysis ecosystem—EnergyPlus, OpenStudio, and third-party applications—can be used to support retrofits. This will be a high-level introduction to DOE's open-source whole-building energy simulation platform, the EnergyPlus engine and the OpenStudio software development kit (SDK), and end-user applications that have been built on top of these—including the OpenStudio demo application. The particular use case will be retrofit planning, and several case studies will be presented.

**Session Speaker:**

- Andrew Parker, National Renewable Energy Laboratory

**Track 8: Energy Leadership**  
**Room 122**

**Implementing Clean Power Plan 111(d)**

The U.S. Environmental Protection Agency has just released its final regulations for the Clean Power Plan under the authority of the Clean Air Act and Section 111(d). This session will review the implications of this important regulation, how states are planning to implement it, and what impacts it will have on federal facilities.

**Session Speaker:**

- Chris Hessler, AJW

*CEUs are not available for this session.*

**Track 9: Institutional Change**  
**Room 128**

**Federal Buildings Personnel Training Act: What it Means for You, What Our Agencies are Doing About it, and Resources and Tools You can Use**

Technical and policy knowledge are required for staff to excel in managing federal facilities and meeting federal goals. This session will provide an overview of energy-related portions of the Federal Buildings Personnel Training Act that are most salient to federal building managers and operators. Speakers will identify an array of tools, training, and resources that are available to help people operate buildings better. The session will go beyond simply listing competency-related tools, etc.; participants will discuss issues involved in translating technical competence into “normal practices” that are effective in achieving and sustaining energy-efficient building operation.

**Session Speakers:**

- Beverly Dyer, U.S. Department of Energy
- Brian Gilligan, U.S. General Services Administration

**Track 10: Innovation**  
**Room 125**

**Utility-Based Technology Demonstration Programs**

When it comes to installing the most energy-efficient equipment on a federal site, opportunities abound. However, the best choices are not always apparent. Session attendees will learn how to decide whether a new and emerging technology is right for their sites. Utility companies have been evaluating emerging gas- and electric-fired technologies for years. This session provides a chance to learn from their expertise.

**Session Speakers:**

- Phil Consiglio, Southern California Edison
- Nate Taylor, Southern California Gas

*CEUs are not available for this session.*

## Session 9 • Thursday, August 13 • 9:45 am – 11:15 am

### Track 1: Solution Showcase Room 126

#### Lessons Learned from ARRA Projects

This session will provide an overview of the American Recovery and Reinvestment Act of 2009 (Recovery Act), commonly referred to as the “stimulus package.” On February 17, 2009, in direct response to the economic crisis, the Recovery Act was signed into law. The U.S. General Services Administration is using \$5.5 billion in Recovery Act funds to convert federal buildings to high-performance green buildings and to build new, energy-efficient federal offices, courthouses, and land ports of entry. This session will cover uses of Recovery Act funding, results of Recovery Act programs, and practices in sustainable design and construction developed through these programs. Session attendees will gain valuable insight through lessons learned from the Recovery Act and learn how to incorporate these lessons into future projects.

##### Session Speakers:

- Kevin Kampschroer, U.S. General Services Administration
- Walter Tersch, U.S. General Services Administration
- Martin Weiland, U.S. General Services Administration

### Track 2: Agency Energy Manager Room 127

#### Energy Manager Skill Development Resources and Certifications

Session speakers will discuss resources for increasing skills via the Federal Energy Management Program (FEMP) eLearning training program and the U.S. General Services Administration (GSA) Skills Assessment and Planning tool. FEMP's program helps agencies foster and maintain a high-performance workforce to construct, operate, and maintain facilities in an energy-efficient, sustainable, and cost-effective manner. The GSA Skills Assessment and Planning tool supports benchmarking and knowledge updating for federal facilities managers and helps ensure compliance with the Federal Buildings Personnel Training Act.

##### Session Speakers:

- Beverly Dyer, U.S. Department of Energy
- Brian Gilligan, U.S. General Services Administration
- Daniel Kreeger, Association of Climate Change Officers

### Track 3: Energy Technologies Room 132

#### Incorporating the Voice of the Customer: Shaping the R&D Programs

This session will discuss how new technologies enter the market (with the help of demonstration programs) and how demand signals are generated to drive technology development through Federal agency requirements. Incorporating new technologies will help Federal Energy

Managers meet their sustainability goals quicker than originally thought.

##### Session Speakers:

- Mike Bushey, Southern California Edison
- Bernard Lindsey, U.S. Navy
- Cheryl Martin, Harwich Partners
- Karma Sawyer, U.S. Department of Energy

### Track 4: Sustainability Room 121

#### Reducing Scope 1, 2 and 3 Greenhouse Gas Emissions

Session speakers will describe agency progress toward greenhouse gas emissions management goals since they were first implemented under EO 13514 and the areas in which agencies are still challenged to reduce emissions moving forward. This session will also address strategies for managing Scope 1 fugitive emissions and Scope 3 sources, such as employee transportation. *Please note that strategies for addressing Scope 1 and Scope 2 energy emissions from buildings and fleet sources are covered in other sessions during the Energy Exchange.*

##### Session Speakers:

- Jed Ela, U.S. General Services Administration
- Chris Steuer, ICF International
- Chris Tremper, U.S. Department of Energy

### Track 5: Project Financing Room 131

#### Forum on Lessons Learned from Financed Projects

There is an ongoing need to share lessons learned from the implementation of financed projects within the federal space. A panel with representation from federal agencies, energy service companies, and federal finance vehicle program management will share their lessons learned in the area of performance contracting in an open forum discussion. The panel will step through the various phases of performance contracting, from the very beginning of project development all the way through annual project performance. Additional sub-topics will explore technologies deployed and approaches to greater energy savings through deep retrofits.

##### Session Speakers:

- Christopher Abbuehl, Constellation Energy
- Doug Culbreth, Oak Ridge National Laboratory
- Charlie Hein, Federal Bureau of Prisons
- Randy Smidt, U.S. Army
- Karen Thomas, National Renewable Energy Laboratory



**Track 6: Integrated Energy**  
**Room 129**

**Low/No Cost Solutions through Building Automation System Control Technologies**

The expanded use of building automation systems and control strategies is providing low-/no-cost energy savings solutions. The session will cover these solutions, highlighting savings opportunities available through the appropriate use of building automation system controls. Federal energy managers can implement these solutions to further sustainability goals and greening of the government.

**Session Speakers:**

- Don Albinger, Johnson Controls
- Linda Baschnagel, U.S. General Services Administration
- Nick Fernandez, Pacific Northwest National Laboratory
- James Goddard, Pacific Northwest National Laboratory
- Danny Taasevigen, Pacific Northwest National Laboratory

**Track 7: Building Performance**  
**Room 124**

**Operations and Maintenance Strategies for Improved Building Performance**

This session will provide participants with a series of strategies for improving building performance through improved operations and maintenance, which will include benchmarking and retro-commissioning. Federal building operations can be improved with Portfolio Manager strategies, the Certificate of Proficiency in Benchmarking Proficiency, and the Existing Building Commissioning Process. By learning Portfolio Manager's capabilities, participants will understand how the tool can be a catalyst in building operations improvements throughout the building benchmarking process. Competence in using Portfolio Manager to maximize benchmarking capabilities can be obtained through training programs such as the Certificate of Proficiency in Benchmarking Program. Going beyond benchmarking, the Existing Building Commissioning Process can be used to improve building performance and operations.

**Session Speakers:**

- Liz Fischer, Building Commissioning Association
- Terra Meierdierck, New Jersey Institute of Technology
- Zach Shelin, The Cadmus Group, Inc.

**Track 8: Energy Leadership**  
**Room 122**

**Industry Roundtable**

It takes two to tango. During this session, industry representatives will talk openly about what is and is not working. Attendees will gain a better understanding of what motivates industry to bid on government work—and what makes industry think twice about, or even decline, participation in a program or a bid.

**Session Speakers:**

- Alicia Collier, Honeywell
- Darcy Immerman, AECOM
- Kathy Robb, AGL Resources

*CEUs are not available for this session.*

**Track 9: Institutional Change**  
**Room 128**

**Case Studies of Institutional Change at the Campus Level**

This session will include case studies of campus-wide initiatives that use an institutional change framework and principles. ("Campus-wide initiatives" are defined as campus-level, installation-level, or agency-level efforts that present a large opportunity for energy savings.) Session speakers will suggest actionable steps that session participants, particularly federal energy managers, can put into practice in their own organizations to drive institutional change, especially with regard to greening the government and achieving sustainability goals.

**Session Speakers:**

- Daniel Gore, U.S. Department of Energy
- Kathleen Judd, Pacific Northwest National Laboratory
- Kristen Parrish, Arizona State University
- John Riley, Arizona State University

**Track 10: Innovation**  
**Room 125**

**Cybersecurity Roundtable**

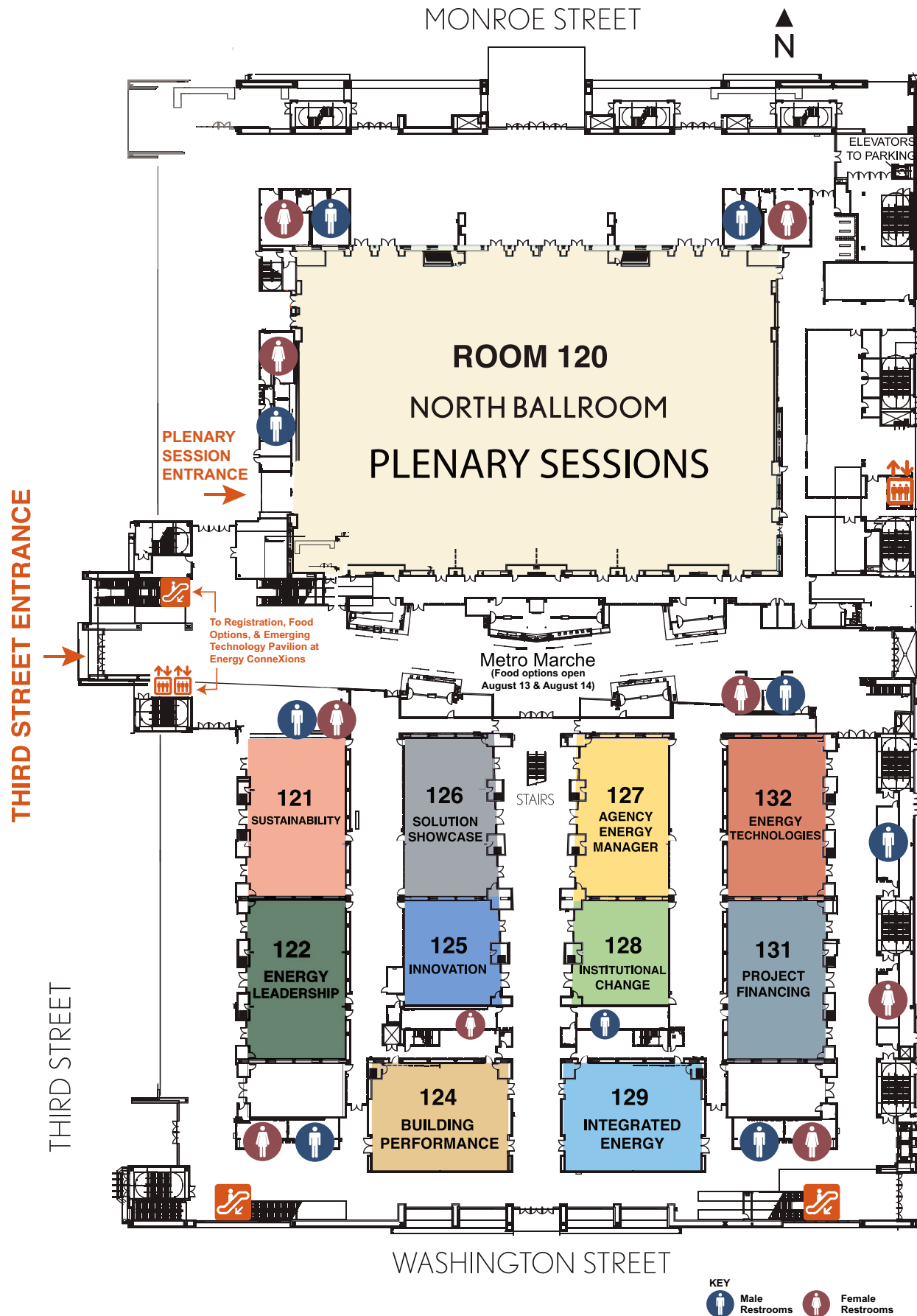
In this roundtable discussion, representatives of the U.S. Department of Defense, U.S. Army Corps of Engineers, and industry will review the evolving cybersecurity challenges faced by the energy sector. This session will include discussions on policy, operational, and cultural considerations for managing cyber risks and ensuring resilience in our changing world.

**Session Speakers:**

- Mike Aimone, U.S. Department of Defense
- Kevin Staggs, Honeywell
- John Trudell, U.S. Army Corps of Engineers
- Kevin Whitt, Booz Allen Hamilton

*CEUs are not available for this session.*

# Phoenix Convention Center Map







Save the Date! Energy Exchange 2016: August 9-11, 2016



U.S. DEPARTMENT OF  
**ENERGY**